

WHAT IS CLAIMED IS:

1. A composition which modulates the activity of a p11 protein and effects a change in the level of plasminogen activation by a cell.
2. The composition of claim 1, wherein the composition is selected from the group consisting of antisense p11 polynucleotide, sense p11 polynucleotide, and small interfering RNA specific to p11.
3. The composition of claim 1 wherein (a) the composition comprises a polynucleotide, (b) the composition reduces the activity of a p11 protein by inhibiting the production of the p11 protein by the cell, and (c) the level of plasminogen activation is reduced by the cell.
4. The composition of claim 3 wherein the polynucleotide is an antisense p11 polynucleotide.
5. The composition of claim 4 wherein the antisense p11 polynucleotide comprises a sequence as set forth in any one of SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159 and SEQ ID NO:160.
6. The composition of claim 5 wherein the antisense p11 polynucleotide consists essentially of a sequence as set forth in any one of SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159 and SEQ ID NO:160.
7. The composition of claim 6 wherein the antisense p11 polynucleotide comprises a nucleic acid of SEQ ID NO:13, SEQ ID NO:14 or SEQ ID NO:15.
8. The composition of claim 7 wherein the antisense p11 polynucleotide consists essentially of a nucleic acid of SEQ ID NO:16.

9. The composition of claim 3 wherein the polynucleotide is a small interfering RNA (“siRNA”).
10. The composition of claim 9 wherein the siRNA comprises a sequence as set forth in any one of SEQ ID NO:18 through SEQ ID NO:144.
11. The composition of claim 10 wherein the siRNA consists essentially of a sequence as set forth in any one of SEQ ID NO:18 through SEQ ID NO:22 and SEQ ID NO:24 through SEQ ID NO:144.
12. The composition of claim 10 wherein the siRNA comprises a sequence set forth in SEQ ID NO:22.
13. The composition of claim 12 wherein the siRNA consists essentially of the sequences set forth in SEQ ID NO:22, SEQ ID NO:23 and SEQ ID NO:24.
14. The composition of claim 1 wherein (a) the composition comprises a polynucleotide, (b) the composition increases the activity of a p11 protein by increasing the production of the p11 protein by the cell, and (c) the level of plasminogen activation is increased by the cell.
15. The composition of claim 14 wherein the composition is a sense p11 polynucleotide.
16. The composition of claim 15 wherein the sense p11 polynucleotide comprises a sequence as set forth in SEQ ID NO:17.
17. The composition of any one of claim 1 wherein the cell is a cancer cell.
18. The composition of claim 17 wherein the cell is selected from the group consisting of a HT1080 fibrosarcoma cell, a LNCaP prostate cancer cell and a CCL-222 colorectal adenocarcinoma cell.
19. A method for modulating the activity of p11 comprising administering to a cell an effective amount of a composition, which modulates the activity of a p11 protein and effects a change in the level of plasminogen activation by a cell, such that the level of plasminogen activation is changed relative to an untreated cell.
20. The method of claim 19 wherein the composition comprises a polynucleotide comprising a sequence as set forth in any one of SEQ ID NO:13-160.

21. The method of claim 19 wherein the cell is a cancer cell.
22. The method of claim 20 wherein the cell is selected from the group consisting of a HT1080 fibrosarcoma cell, a LNCaP prostate cancer cell and a CCL-222 colorectal adenocarcinoma cell.
23. A method of reducing the development of cancer in a patient comprising administering to a cancer cell in a patient a therapeutically effective amount of a composition, which modulates the activity of a p11 protein and effects a change in the level of plasminogen activation by a cell, such that the level of plasminogen activation is changed relative to an untreated cell.
24. The method of claim 23 wherein the composition comprises a polynucleotide comprising a sequence as set forth in any one of SEQ ID NO:13-160.
25. The method of claim 23 wherein the patient is a mouse.
26. The method of claim 23 wherein the cancer cell is a human cancer cell.
27. The method of claim 23 wherein the cancer cell is selected from the group consisting of a HT1080 fibrosarcoma cell, a LNCaP prostate cancer cell and a CCL-222 colorectal adenocarcinoma cell.
28. A method of inhibiting the growth of tumors in a patient comprising administering to a cancer cell in a patient a therapeutically effective amount of a composition, which modulates the activity of a p11 protein and effects a change in the level of plasminogen activation by a cell, such that the level of plasminogen activation is changed relative to an untreated cell.
29. The method of claim 28 wherein the composition comprises a polynucleotide comprising a sequence as set forth in any one of SEQ ID NO:13-160.
30. The method of claim 28 wherein the patient is a mouse.
31. The method of claim 28 wherein the cancer cell is a human cancer cell.
32. The method of claim 28 wherein the cancer cell is selected from the group consisting of a HT1080 fibrosarcoma cell, a LNCaP prostate cancer cell and a CCL-222 colorectal adenocarcinoma cell.

33. A method of inhibiting tumor cell invasion comprising administering to said tumor cell a composition, which modulates the activity of a p11 protein and effects a change in the level of plasminogen activation by a cell, such that the level of plasminogen activation is changed relative to an untreated cell.
34. The method of claim 33 wherein the composition comprises a polynucleotide comprising a sequence as set forth in any one of SEQ ID NO:13-160.
35. The method of claim 33 wherein the tumor cell is a human cancer cell.
36. The method of claim 33 wherein the tumor cell is selected from the group consisting of a HT1080 fibrosarcoma cell, a LNCaP prostate cancer cell and a CCL-222 colorectal adenocarcinoma cell.
37. A method of making a clonal cell line comprising isolating a cell, then characterizing the activity of a protein produced by the cell or clonal progeny of the cell, wherein the protein is involved in plasminogen activation.
38. The method of claim 37 wherein the protein is selected from the group consisting of tPA, uPA, uPAR, PAI-1, PAI-2 and p11.
39. The method of claim 38 wherein the protein is p11.
40. The method of claims 37 wherein the cell is a cancer cell.
41. The method of claim 40 wherein the cell is selected from the group consisting of a HT1080 fibrosarcoma cell, a LNCaP prostate cancer cell and a CCL-222 colorectal adenocarcinoma cell.
42. A clonal cell line useful in the identification of compositions that modulate p11 activity, wherein the clonal cell line is made according to the method of claim 37.
43. A method of identifying a composition that modulates p11 activity comprising administering the composition to a clonal cell line made according to the method of claim 37, determining the change in p11 activity of a cell of the clonal cell line relative to a cell of a clonal cell line that had not received the composition, and identifying the composition that produces a change in p11 activity.

44. The method of claim 43 wherein the change in p11 activity is a change in the level of plasminogen activation activity.